

What is claimed is:

1. A method for the controlled tempering of a casting trough integrated between a supply vessel for a molten metal that is copper or a copper alloy, and at least one continuous casting mold, comprising the steps of:

providing at least a partial lining on at least one trough wall and a trough floor of the casting trough, the partial lining having a specific electrical resistance approximately between about  $10^{-1} \Omega \cdot m$  and  $10^{-6} \Omega \cdot m$  and the partial lining being resistant to heat of the molten metal; and

inductively heating the lining layer by an electrical heating device that is arranged outside the lining layer.

2. The method according to claim 1, further comprising the step of:

regulating the inductive tempering of the lining layer depending on temperature measurements.

3. The method according to claim 1, wherein the heating device is operated at a frequency approximately between 100 Hz and 15,000 Hz, preferably approximately between 1,000 Hz and 8,000 Hz.

4. The method according to claim 1, wherein the lining layer is inductively heated to a temperature of more than approximately 50%, preferably more than approximately 80%, of the liquidus temperature in degrees Celsius of the molten metal before a start of casting.

5. A casting trough comprising:

at least one trough wall attached to a trough floor for holding a molten metal;  
an interior lining layer disposed on at least one-third of an interior surface of the casting trough, the interior lining layer resistant to a heat of the molten metal, the interior lining layer having a specific electrical resistance approximately between  $10^{-1} \Omega \cdot m$  and  $10^{-6} \Omega \cdot m$ , the interior lining layer having a thickness ranging approximately between 9 mm and 150 mm; and

a heating device having conductors that are energized with electric current, the conductors arranged circumferentially at least in a longitudinal direction of the at least one

trough wall, so that the lining layer can be heated by the device.

6. The casting trough according to claim 5 wherein the trough has a length to width ratio equal to or greater than 3.

7. The casting trough according to claim 5, wherein the lining layer has a thickness approximately between 20 mm and 80 mm.

8. The casting trough according to claim 5, wherein the lining layer is fabricated from at least one material selected from the group consisting of graphite, clay graphite, carbon and silicon carbide.

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